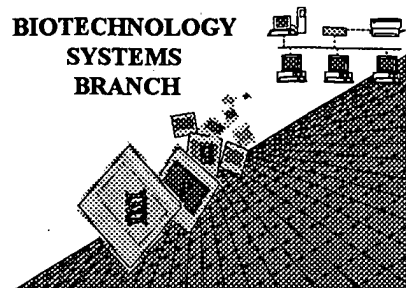


# **RAW SEQUENCE LISTING**

## **ERROR REPORT**

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following CRF diskette:

Application Serial Number: 09/210,952

Art Unit / Team No. : 01PE

Date Processed by STIC: 12/23/98

**THE ATTACHED PRINTOUT EXPLAINS THE ERRORS DETECTED.**

**PLEASE BE SURE TO FORWARD THIS INFORMATION TO THE APPLICANTS BY EITHER:**

**1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANTS ALONG WITH A NOTICE TO COMPLY or,**

**2) CALLING APPLICANTS AND FAXING THEM A COPY OF THE PRINTOUT WITH A NOTICE TO COMPLY**

**THIS WILL INSURE THAT THE NEXT SUBMISSION RECEIVED FROM THEM WILL BE ERROR FREE.**

**IF YOU HAVE ANY FURTHER QUESTIONS, PLEASE CALL:**

**ARTI SHAH 703-308-4212**

# Raw Sequence Listing Error Summary

## ERROR DETECTED SUGGESTED CORRECTION

SERIAL NUMBER: 09/210,952

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1        Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 2        Wrapped Aminos      The amino acid number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 3        Incorrect Line Length      The rules require that a line not exceed 72 characters in length. This includes spaces.  
All text must be visible on page.
- 4        Misaligned Amino Acid Numbering      The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs  
between the numbering. It is recommended to delete any tabs and uses spacing between the numbers.
- 5        Non-ASCII      This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
- 6        Variable Length      Sequence(s) 1,2,3,4,5 (maybe more) contain n's or Xaa's which represented more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and  
indicate in the (ix) features section that some may be missing.
- 7        Wrong Designation      Sequence(s)        contain amino acid or nucleic acid designators which are not standard  
representations as per the Sequence Rules (Please refer to paragraph 1.822)
- 8        Skipped Sequences (OLD RULES)      Sequence(s)        missing. If intentional, please use the following format for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X:  
(I) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:  
This sequence is intentionally skipped  
  
Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
- 9        Skipped Sequences (NEW RULES)      Sequence(s)        missing. If intentional, please use the following format for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000
- 10        Use of N's or Xaa's (NEW RULES)      Use of N's and/or Xaa's have been detected in the Sequence Listing.  
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
- 11        Use of <213>Organism (NEW RULES)      Sequence(s)        are missing this mandatory field or its response.
- 12        Use of <220>Feature (NEW RULES)      Sequence(s)        are missing the <220>Feature and associated headings.  
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"  
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32)  
(Sec. 1.823 of new Sequence Rules)
- 13        Wrong Format      File submitted was in the alphabetical heading format of the Old Sequence Rules. This is invalid since the  
"Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Disclosures"  
Federal Register Notice, Vol. 63, No. 104, June 1, 1998, p. 29620  
applies to applications filed on or after July 1, 1998.  
AKS-Biotechnology Systems Branch- 7/10/98

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/210,952DATE: 12/23/1998  
TIME: 15:06:21

Input Set: I210952.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

see p. 5  
new format

Does Not Comply  
Corrected Diskette Needed

1 <110> APPLICANT: Fainzilber, Michael M.  
2 Kits, Karel S.  
3 Burlingame, Alma L.  
4 Olivera, Baldomero M.  
5 Walker, Craig  
6 Watkins, Maren  
7 Shetty, Reshma  
8 Cruz, Lourdes J.  
9 Imperial, Julita  
10 Colledge, Clark  
11 University of Utah Research Foundation  
12 Vrije Universiteit  
13 Regents of the University of California  
14 <120> TITLE OF INVENTION: Gamma-Conopeptides  
15 <130> FILE REFERENCE: Gamma-Conopeptides  
16 <140> CURRENT APPLICATION NUMBER: US/09/210,952  
17 <141> CURRENT FILING DATE: 1998-12-15  
18 <150> EARLIER APPLICATION NUMBER: US 60/069,706  
19 <151> EARLIER FILING DATE: 1997-12-16  
20 <160> NUMBER OF SEQ ID NOS: 47  
21 <170> SOFTWARE: PatentIn Ver. 2.0  
22 <210> SEQ ID NO 1  
23 <211> LENGTH: 13  
24 <212> TYPE: PRT  
25 <213> ORGANISM: Artificial Sequence  
26 <220> FEATURE:  
27 <223> OTHER INFORMATION: Description of Artificial Sequence: generic formula  
28 of gamma-conopeptides  
29 <220> FEATURE:  
30 <221> NAME/KEY: PEPTIDE  
31 <222> LOCATION: (1)  
32 <223> OTHER INFORMATION: Xaa at residue 1 is des-Xaa or a peptide having  
33 1-6 amino acids.  
34 <220> FEATURE:  
35 <221> NAME/KEY: PEPTIDE  
36 <222> LOCATION: (3)  
37 <223> OTHER INFORMATION: Xaa at residue 3 is a peptide having 5-6 amino  
38 acids.  
39 <220> FEATURE:  
40 <221> NAME/KEY: PEPTIDE  
41 <222> LOCATION: (5)  
42 <223> OTHER INFORMATION: Xaa at residue 5 is a peptide having 4 amino  
43 acids.  
44 <220> FEATURE:

invalid - see item 6 on Ena summary sheet

same ena

same

PAGE: 2

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/210,952

DATE: 12/23/1998  
TIME: 15:06:21

Input Set: I210952.RAW

45 <221> NAME/KEY: PEPTIDE *OK*  
 46 <222> LOCATION: (6)  
 47 <223> OTHER INFORMATION: Xaa at residue 6 is Glu, gamma-carboxylglutamate  
 48 or Gln.  
 49 <220> FEATURE:  
 50 <221> NAME/KEY: PEPTIDE  
 51 <222> LOCATION: (9) *enw*  
 52 <223> OTHER INFORMATION: Xaa at residue 9 is a peptide having 3-4 amino  
 53 acids.  
 54 <220> FEATURE:  
 55 <221> NAME/KEY: PEPTIDE  
 56 <222> LOCATION: (11) *enw*  
 57 <223> OTHER INFORMATION: Xaa at residue 11 is a peptide having 3-6 amino  
 58 acids.  
 59 <220> FEATURE:  
 60 <221> NAME/KEY: PEPTIDE  
 61 <222> LOCATION: (13) *enw*  
 62 <223> OTHER INFORMATION: Xaa at residue 13 is des-Xaa or a peptide of 2-9  
 63 amino acids.  
 64 <400> SEQUENCE: *OK*  
 65 Xaa Cys Xaa Cys Xaa Xaa Cys Cys Xaa Cys Xaa Cys Xaa  
 66 1 5 10  
 67 <210> SEQ ID NO 2  
 68 <211> LENGTH: 14  
 69 <212> TYPE: PRT  
 70 <213> ORGANISM: Artificial Sequence  
 71 <220> FEATURE:  
 72 <223> OTHER INFORMATION: Description of Artificial Sequence: generic  
 73 sequence of gamma-conopeptides.  
 74 <220> FEATURE:  
 75 <221> NAME/KEY: PEPTIDE  
 76 <222> LOCATION: (1) *same enw as seq 1*  
 77 <223> OTHER INFORMATION: Xaa at residue 1 is des-Xaa or a peptide having  
 78 1-6 amino acids.  
 79 <220> FEATURE:  
 80 <221> NAME/KEY: PEPTIDE  
 81 <222> LOCATION: (3) *same*  
 82 <223> OTHER INFORMATION: Xaa at residue 3 is a peptide having 5-6 amino  
 83 acids.  
 84 <220> FEATURE:  
 85 <221> NAME/KEY: PEPTIDE  
 86 <222> LOCATION: (5) *same*  
 87 <223> OTHER INFORMATION: Xaa at residue 5 is a peptide having 4 amino  
 88 acids.  
 89 <220> FEATURE:  
 90 <221> NAME/KEY: PEPTIDE  
 91 <222> LOCATION: (6) *OK*  
 92 <223> OTHER INFORMATION: Xaa at residue 6 is Glu, gamma-carboxylglutamate or  
 93 Gln.  
 94 <220> FEATURE:

W--&gt;

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/210,952

DATE: 12/23/1998  
TIME: 15:06:21

Input Set: I210952.RAW

95 <221> NAME/KEY: PEPTIDE *OK*  
 96 <222> LOCATION: (9)  
 97 <223> OTHER INFORMATION: Xaa at residue 9 is Ser or Thr.  
 98 <220> FEATURE:  
 99 <221> NAME/KEY: PEPTIDE  
 100 <222> LOCATION: (10) *enw*  
 101 <223> OTHER INFORMATION: Xaa at residue 10 is a peptide having 2-3 amino  
 102 acids.  
 103 <220> FEATURE:  
 104 <221> NAME/KEY: PEPTIDE  
 105 <222> LOCATION: (12) *enw*  
 106 <223> OTHER INFORMATION: Xaa at residue 12 is a peptide having 3-6 amino  
 107 acids.  
 108 <220> FEATURE:  
 109 <221> NAME/KEY: PEPTIDE  
 110 <222> LOCATION: (14) *enw*  
 111 <223> OTHER INFORMATION: Xaa at residue 14 is a peptide having 2-9 amino  
 112 acids.  
 113 <400> SEQUENCE: 2 *OK*  
 114 Xaa Cys Xaa Cys Xaa Xaa Cys Cys Xaa Xaa Cys Xaa Cys Xaa *10*  
 115  
 116 <210> SEQ ID NO 3  
 117 <211> LENGTH: 16  
 118 <212> TYPE: PRT  
 119 <213> ORGANISM: Artificial Sequence  
 120 <220> FEATURE:  
 121 <223> OTHER INFORMATION: Description of Artificial Sequence: generic formula  
 122 of gamma-conopeptides  
 123 <220> FEATURE:  
 124 <221> NAME/KEY: PEPTIDE  
 125 <222> LOCATION: (1) *enw*  
 126 <223> OTHER INFORMATION: Xaa at residue 1 is a peptide having 1-6 amino  
 127 acids.  
 128 <220> FEATURE:  
 129 <221> NAME/KEY: PEPTIDE  
 130 <222> LOCATION: (3) *"Xaa" can only represent a single amino acid, nothing else.*  
 131 <223> OTHER INFORMATION: Xaa at residue 3 is a hexapeptide. *enw*  
 132 <220> FEATURE:  
 133 <221> NAME/KEY: PEPTIDE  
 134 <222> LOCATION: (5)  
 135 <223> OTHER INFORMATION: Xaa at residue 5 is a peptide having 4 amino  
 136 acids.  
 137 <220> FEATURE:  
 138 <221> NAME/KEY: PEPTIDE  
 139 <222> LOCATION: (6) *d*  
 140 <223> OTHER INFORMATION: Xaa at residue 6 is Glu or gamma-carboxyglutamate.  
 141 <220> FEATURE:  
 142 <221> NAME/KEY: PEPTIDE  
 143 <222> LOCATION: (14)  
 144 <223> OTHER INFORMATION: Xaa at residue 14 is a tripeptide.

W--&gt;

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/210,952

DATE: 12/23/1998  
TIME: 15:06:21

Input Set: I210952.RAW

145 <220> FEATURE:  
146 <221> NAME/KEY: PEPTIDE  
147 <222> LOCATION: (16) *err*  
148 <223> OTHER INFORMATION: Xaa at residue 16 is a peptide having 7-9 amino  
149 acids.  
150 <400> SEQUENCE: 3  
W--> 151 Xaa Cys Xaa Cys Xaa Xaa Cys Cys Ser Asn Ser Cys Asp Xaa Cys Xaa  
152 1 5 10 15  
153 <210> SEQ ID NO 4  
154 <211> LENGTH: 17  
155 <212> TYPE: PRT  
156 <213> ORGANISM: Artificial Sequence  
157 <220> FEATURE:  
158 <223> OTHER INFORMATION: Description of Artificial Sequence: generic  
159 sequence of gamma-conopeptides.  
160 <220> FEATURE:  
161 <221> NAME/KEY: PEPTIDE  
162 <222> LOCATION: (1) *err*  
163 <223> OTHER INFORMATION: Xaa at residue 1 is a peptide having 1-6 amino  
164 acids.  
165 <220> FEATURE:  
166 <221> NAME/KEY: PEPTIDE  
167 <222> LOCATION: (3)  
168 <223> OTHER INFORMATION: Xaa at residue 3 is a hexapeptide. *see seq 3*  
169 <220> FEATURE:  
170 <221> NAME/KEY: PEPTIDE  
171 <222> LOCATION: (5) *OK*  
172 <223> OTHER INFORMATION: Xaa at residue 5 is Ser or Thr.  
173 <220> FEATURE:  
174 <221> NAME/KEY: PEPTIDE  
175 <222> LOCATION: (6)  
176 <223> OTHER INFORMATION: Xaa at residue 6 is a tripeptide.  
177 <220> FEATURE:  
178 <221> NAME/KEY: PEPTIDE  
179 <222> LOCATION: (7) *OK*  
180 <223> OTHER INFORMATION: Xaa at residue 7 is Glu or gamma-carboxyglutamate.  
181 <220> FEATURE:  
182 <221> NAME/KEY: PEPTIDE  
183 <222> LOCATION: (15)  
184 <223> OTHER INFORMATION: Xaa at residue 15 is a tripeptide.  
185 <220> FEATURE:  
186 <221> NAME/KEY: PEPTIDE  
187 <222> LOCATION: (17) *17? err*  
188 <223> OTHER INFORMATION: Xaa at residue is a peptide having 7-9 amino  
189 acids.  
190 <400> SEQUENCE: 4  
W--> 191 Xaa Cys Xaa Cys Xaa Xaa Xaa Cys Cys Ser Asn Ser Cys Asp Xaa Cys  
192 5 10 15  
W--> 193 Xaa  
194 <210> SEQ ID NO 5

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/210,952

DATE: 12/23/1998  
TIME: 15:06:21

Input Set: I210952.RAW

195 <211> LENGTH: 26  
196 <212> TYPE: PRT  
197 <213> ORGANISM: Artificial Sequence  
198 <220> FEATURE:  
199 <223> OTHER INFORMATION: Description of Artificial Sequence:generic  
200 sequence of gamma-conopeptides.  
201 <220> FEATURE:  
202 <221> NAME/KEY: PEPTIDE  
203 <222> LOCATION: (1)  
204 <223> OTHER INFORMATION: Xaa at residue 1 is des-Xaa or a dipeptide.  
205 <220> FEATURE:  
206 <221> NAME/KEY: PEPTIDE  
207 <222> LOCATION: (2)  
208 <223> OTHER INFORMATION: Xaa at residue 2 is Asp, Glu or *OK*  
209 gamma-carboxyglutamate.  
210 <220> FEATURE:  
211 <221> NAME/KEY: PEPTIDE  
212 <222> LOCATION: (4)  
213 <223> OTHER INFORMATION: Xaa at residue 4 is a dipeptide.  
214 <220> FEATURE:  
215 <221> NAME/KEY: PEPTIDE  
216 <222> LOCATION: (5) *OK*  
217 <223> OTHER INFORMATION: Xaa at residue 5 is Trp or 6-bromo-Trp.  
218 <220> FEATURE:  
219 <221> NAME/KEY: PEPTIDE  
220 <222> LOCATION: (7)  
221 <223> OTHER INFORMATION: Xaa at residue 7 is dipeptide.  
222 <220> FEATURE:  
223 <221> NAME/KEY: PEPTIDE  
224 <222> LOCATION: (10)  
225 <223> OTHER INFORMATION: Xaa at residue 10 is a dipeptide.  
226 <220> FEATURE:  
227 <221> NAME/KEY: PEPTIDE  
228 <222> LOCATION: (12) *OK*  
229 <223> OTHER INFORMATION: Xaa at residue 12 is Glu, gamma-carboxyglutamate  
230 or Gln.  
231 <220> FEATURE:  
232 <221> NAME/KEY: PEPTIDE  
233 <222> LOCATION: (24) *OK*  
234 <223> OTHER INFORMATION: Xaa at residue 24 is any amino acid.  
235 <220> FEATURE:  
236 <221> NAME/KEY: PEPTIDE  
237 <222> LOCATION: (26)  
238 <223> OTHER INFORMATION: Xaa at residue 26 is a pentapeptide.  
239 <400> SEQUENCE: 5  
W--> 240 Xaa Xaa Cys Xaa Xaa Phe Xaa Cys Thr Xaa Ser Xaa Cys Cys Ser Asn  
241 1 5 10 15  
W--> 242 Ser Cys Asp Trp Thr Tyr Cys Xaa Leu Xaa  
243 20 25  
244 <210> SEQ ID NO 6

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <223> fields of each sequence which presents at least one n or Xaa.

Input Set: I210952.RAW

Line	Error/Warning	Original Text
65	W "N" or "Xaa" used: Feature required	Xaa Cys Xaa Cys Xaa Xaa Cys Cys Xaa Cys X
114	W "N" or "Xaa" used: Feature required	Xaa Cys Xaa Cys Xaa Xaa Cys Cys Xaa Xaa C
151	W "N" or "Xaa" used: Feature required	Xaa Cys Xaa Cys Xaa Xaa Cys Cys Ser Asn S
191	W "N" or "Xaa" used: Feature required	Xaa Cys Xaa Cys Xaa Xaa Xaa Cys Cys Ser A
193	W "N" or "Xaa" used: Feature required	Xaa
240	W "N" or "Xaa" used: Feature required	Xaa Xaa Cys Xaa Xaa Phe Xaa Cys Thr Xaa S
242	W "N" or "Xaa" used: Feature required	Ser Cys Asp Trp Thr Tyr Cys Xaa Leu Xaa
256	W "N" or "Xaa" used: Feature required	Asp Cys Thr Ser Xaa Phe Gly Arg Cys Thr V
258	W "N" or "Xaa" used: Feature required	Ser Asn Ser Cys Asp Gln Thr Tyr Cys Xaa L
272	W "N" or "Xaa" used: Feature required	Xaa Leu Xaa Cys Ser Val Xaa Phe Ser His C
274	W "N" or "Xaa" used: Feature required	Cys Cys Ser Asn Ser Cys Asp Gln Thr Tyr C
276	W "N" or "Xaa" used: Feature required	Asp Xaa
289	W "N" or "Xaa" used: Feature required	Xaa Xaa Arg Xaa Gly Gly Cys Met Ala Xaa P
291	W "N" or "Xaa" used: Feature required	Asp Ser Xaa Cys Cys Ser Asn Ser Cys Asp V
293	W "N" or "Xaa" used: Feature required	Met Xaa Phe Xaa Xaa Asp Xaa
305	W "N" or "Xaa" used: Feature required	Cys Lys Thr Tyr Ser Lys Tyr Cys Xaa Ala A
307	W "N" or "Xaa" used: Feature required	Xaa Gln Cys Val Arg Ser Tyr Cys Thr Leu P
321	W "N" or "Xaa" used: Feature required	Asp Xaa Xaa Asp Asp Gly Cys Ser Val Xaa G
323	W "N" or "Xaa" used: Feature required	Ala Xaa Cys Cys Ser Gly Asp Cys His Xaa T
325	W "N" or "Xaa" used: Feature required	Xaa Val
338	W "N" or "Xaa" used: Feature required	Gly Met Xaa Gly Xaa Cys Lys Asp Gly Leu T
340	W "N" or "Xaa" used: Feature required	Ser Xaa Cys Cys Ser Xaa Asp Cys Xaa Gly S
353	W "N" or "Xaa" used: Feature required	Xaa Cys Arg Ala Xaa Tyr Ala Xaa Cys Ser X
369	W "N" or "Xaa" used: Feature required	Asn Gly Gln Cys Xaa Asp Val Xaa Met Xaa C
371	W "N" or "Xaa" used: Feature required	Cys Cys Ser Leu Asp Cys Xaa Met Tyr Cys T
384	W "N" or "Xaa" used: Feature required	Cys Gly Gly Xaa Ser Thr Tyr Cys Xaa Val A
386	W "N" or "Xaa" used: Feature required	Xaa Ser Cys Val Arg Ser Tyr Cys Thr Leu P
399	W "N" or "Xaa" used: Feature required	Asn Gly Gly Cys Lys Ala Thr Xaa Met Ser C
579	W "N" or "Xaa" used: Feature required	ctctgccggt tgacantca tctactctct cagtctcc
800	W Invalid/Missing Amino Acid Numbering	
831	W "N" or "Xaa" used: Feature required	Leu Cys Xaa Asp Tyr Thr Xaa Xaa Cys Ser H
833	W "N" or "Xaa" used: Feature required	Ser Xaa Asn Cys Tyr Asn Gly His Cys Thr
847	W "N" or "Xaa" used: Feature required	Xaa Cys Cys Ser
866	W "N" or "Xaa" used: Feature required	sartgytgyt cn
886	W "N" or "Xaa" used: Feature required	athytnytng tngcngcngt nytn
898	W "N" or "Xaa" used: Feature required	Asp Cys Thr Ser Trp Phe Gly Arg Cys Thr V
900	W "N" or "Xaa" used: Feature required	Ser Asn Ser Cys Asp Gln Thr Tyr Cys Xaa L
912	W "N" or "Xaa" used: Feature required	Cys Gly Gly Tyr Ser Thr Tyr Cys Xaa Val A
925	W "N" or "Xaa" used: Feature required	Asp Xaa Thr Ser Trp Phe Gly Arg
938	W "N" or "Xaa" used: Feature required	Xaa Thr Val Asn Ser Xaa Xaa Xaa Ser Asn S
940	W "N" or "Xaa" used: Feature required	Xaa Xaa Leu Tyr Ala Phe Xaa Ser